

IN THE CLAIMS

1. (canceled)

2. (currently amended) The layer 2 link handler as described in claim 7, wherein
said path connection means, switching on a layer 2 packet level, transfers packets that arrive
from said permanent virtual connection path of layer 1-connected respective user-side layer 1
PVC path between said network-side device and the one of the plurality of user-side devices
to the one specified path of the connection request destination.

3. (currently amended) The layer 2 link handler as described in claim 7, wherein
said path connection means includes a setting means that newly sets one path of the
connection request destination specified by said path specification means and connects a path
between the user side device and the specified connection destination said path specification
means further includes a setting means that causes the specified path to be connected between
the network-side device and the one of the plurality of NSPs.

4. (canceled)

5. (currently amended) The layer 2 link handler as described in claim 7, wherein
said path connection means recognizes labels of layer 2 packets that arrive from said
permanent virtual connection path of layer 1-connected between said network-side device and
the user-side device, said labels being assigned for each layer 2 link, and transfers the layer
2 packets to the path to the specified connection destination that corresponds to given labels;
and recognizes labels of labeled layer 2 packets that arrive from the path with the specified
connection destination and transfers the layer 2 packets to the permanent virtual connection

path to the user-side device that corresponds to given label said transfer means transfers the labeled layer 2 packet to the one specified path according to the label in the labeled layer 2 packet.

6. (canceled)

7. (currently amended) A layer 2 link handler provided in a network-side device, the network-side device being connected with to each of a plurality of user-side devices by a respective user-side layer 1 permanent virtual connection (PVC) path of layer 1, wherein said user side device is made to connect to one among multiple specified connection destinations and connected to each of a plurality of network service providers (NSPs) via one of permanent virtual connection paths of layer 1 or a NSP-side layer 1 PVC path and a layer 1 switched virtual connection paths of layer 1 (SVC) path, the layer 2 link handler comprising:

a path specification means that specifies one path of a connection request destination from between the network-side device and one of the plurality of NSPs based on layer 2 link information that is emitted from one of the plurality of user-side devices at the a time of a layer 2 link connection request; and

a path connection means that causes said permanent virtual connection path of layer 1 connected respective user-side layer 1 PVC path between said network-side device and the one of the plurality of user-side devices to connect to the one specified path of the connection request destination, wherein

said path connection means includes a labeling means that, based on the layer 2 link information emitted from the one of the plurality of user-side devices at the time of the layer 2 link connection request, assigns a label of each layer 2 link of said connection request to a to each layer 2 packet from the user-side device, where the label is one of one or more

available label numbers when a label is newly assigned to each layer 2 packet or a different label number when a layer 2 packet is rejected by the one of the plurality of NSPs and is returned to the network-side device because the layer 2 packet is labeled with a same label number as another labeled layer 2 packet, and

 said path connection means further includes a transfer means that transfers ~~a~~the labeled layer 2 packet labeled by said labeling means to the one specified path to said specified connection destination;

 said labeling means includes a selecting means that, when a label is newly assigned to a layer 2 link, selects an arbitrary available label number and emits a labeled layer 2 packet; and said path connection means handles the link of the labeled layer 2 packet that is assigned the same label number, the link of the labeled layer 2 packet being sent back from the side of the device that received said labeled layer 2 packet, as a link of a pair of said layer 2 link newly assigned a label, and

 said labeling means includes an assigning means that newly selects a label number and assigns said label number including in the label a marking indicating that it is a transmission from an allocated label number management side, and handles the link of the labeled layer 2 packet sent back from a reception side with the same label number, to which is added a marking indicating a transmission from the label number non-management side, as a link of the pair of the layer 2 link newly assigned a label.

8. (currently amended) The layer 2 link handler as described in claim 7, wherein said labeling means, when it newly assigns a label to a layer 2 link, determines the label number by doing a negotiation mutually with another device side assigns the label by negotiating a label number with the plurality of user-side devices and the plurality of NSPs.

9. (currently amended) The layer 2 link handler as described in claim 7, wherein
said labeling means, when it newly assigns a label to a layer 2 link, assigns a the label with a
label number directed by according to an operation of a network management operation
device.

10. (currently amended) The layer 2 link handler as described in claim 5, wherein
said path connection means recognizes the labels of layer 2 packets that arrive from said
permanent virtual connection path of layer 1 connected between said network-side device and
the user-side device, said labels being assigned according to the quality of service class of
each layer 2 link, and transfers layer 2 packets to the path to the specified connection
destination that corresponds to the given label labeling means assigns the label according to a
quality-of-service class of the respective user-side layer 1 PVC path between the network-
side device and the one of the plurality of user-side devices.

11. (currently amended) The layer 2 link handler as described in claim 5, wherein
said path connection means recognizes the labels of layer 2 packets that arrive from said
permanent virtual connection path of layer 1 connected between said network-side device and
the user-side device, said labels being assigned according to the connection destination of
each layer 2 link, and transfers layer 2 packets to a path to the specified connection
destination that corresponds to the given label labeling means assigns the label according to
the one specified path.

12. (currently amended) The layer 2 link handler as described in claim 5, wherein
said path connection means recognizes labels of layer 2 packets assigned according to the
distribution type of service in the IP packet within layer 2 link packets that arrive from said

permanent virtual connection path of layer 1 connected between said network-side device and the user-side device, and transfers layer 2 packets to the path to a specified connection destination that corresponds to the given label labeling means assigns the label according to a type of service requested by the one of the plurality of user-side devices.

13. (currently amended) The layer 2 link handler as described in claim 7, wherein said path connection specification means further includes an extracting means that extracts a request connection destination name from the layer 2 link information emitted from the one of the plurality of user-side devices at the time of a the layer 2 link connection request, and a conversion table that converts from said connection destination name to a connection address, and a path determining means that used uses the connection address obtained from said conversion table to cause a path to be connected between the user-side network-side device and a specified connection destination the one of the plurality of NSPs.

14. (currently amended) The layer 2 link handler as described in claim 7, wherein processing that specifies one path of the connection request destination from layer 2 link information in said path specification means is done under software control by a processor, and the path connection means that connects said permanent virtual connection path of layer 1 connected between said network-side device and the user-side device to a path specified by said processor after said path is specified, is constituted by a switching means by means of is hardware controlled by a switching means.

15. (canceled)